NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD

ACCESS ROAD

(ft)
CODE 560

DEFINITION

A travelway constructed as part of a conservation plan.

SCOPE

This standard applies to vehicular and equipment roads constructed to provide access to farms, ranches, fields, conservation systems, structures, woodlands, and recreation areas.

PURPOSE

To provide a fixed route for travel for moving livestock, produce, equipment, and supplies; and to provide access for proper operation, maintenance, and management of conservation enterprises while controlling runoff to prevent erosion and maintain or improve water quality.

CONDITIONS WHERE PRACTICE APPLIES

Where access is needed from a private or public road or highway to a conservation enterprise or measure, or where travelways are needed in a planned land use area.

DESIGN CRITERIA

Access roads shall be designed to serve the enterprise or planned use with the expected vehicular or equipment traffic. The type of vehicle or equipment, speed, loads, climatic, and other conditions under which vehicles and equipment are expected to operate need to be considered.

Visual resources and environmental values shall be considered in planning and designing the road system.

Access roads range from seldom used trails to all-weather roads heavily used by the public and built to very high standards. Some trails facilitate control of forest fires are used for logging, serve as access to remote areas for recreation, or are used for maintenance of facilities.

Where general public use is anticipated, roads should be designed to meet applicable federal, state, or local criteria.

Sound engineering practices shall be followed to insure that the road meets the requirements of its intended use and that maintenance requirements are in line with operating budgets.

Location. Roads shall be located to serve the purpose intended, to facilitate the control and disposal of water, to control or reduce erosion, to make the best use of topographic features, and to include scenic vistas where possible. The roads should generally follow natural contours and slopes to minimize disturbance of drainage patterns. Roads should be located where they can be maintained and so water management problems are not created. To reduce pollution, roads should not be located too near watercourses.

Alinement. The gradient and vertical and horizontal alinement shall be adapted to the intensity of use, mode of travel, and the level of development.

Grades normally should not exceed 10 percent except for short lengths, but maximum grades

of 20 percent or more may be used if necessary for special uses.

Width. The minimum width of the roadbed is 14 ft for one-way traffic and 20 ft for two-way traffic. Single-land logging or special-purpose roads have a minimum width of 10 ft, with greater widths at curves and turnouts. The two-way traffic width shall be increased approximately 4 ft for trailer traffic.

The minimum tread width is 10 ft for one-way traffic and 15 ft for two-way traffic. The tread width for two-way traffic shall be increased approximately 4 ft for trailer traffic.

The minimum shoulder width is 2 ft on each side of the tread width.

Where turnouts are used, road width shall be increased to a minimum of 20 ft for a distance of 30 ft.

Side slopes. All cuts and fills shall have side slopes designed to be stable for the particular site conditions.

Areas with geological conditions and soils subject to slides shall be avoided or treated to prevent slides.

Drainage. The type of drainage structure used will depend on the type of enterprise and runoff conditions. Culverts, bridges, or grade dips for water management shall be provided at all natural drainageways. The capacity and design shall be consistent with sound engineering principles and shall be adequate for the class of vehicle, type of road, development, or use.

Roadside ditches shall be adequate to provide surface drainage for the roadway and deep enough, as needed to serve as outlets for subsurface drainage. Channels shall be designed to be on stable grades or protected with structures or linings for stability.

Water breaks or bars may be used to control surface runoff on low-intensity use forest or similar roads.

Surfacing. Access roads shall be given a wearing course or surface treatment if required by traffic needs, climate, erosion control, or dust control. The type of treatment depends on local conditions, available materials, and the existing road base. If these factors or the volume of traffic is not a problem, no special treatment of the surface is required.

Unsurfaced roads may require controlled access to prevent damage or hazardous conditions during adverse climatic conditions.

Toxic and acid-forming materials shall not be used on roads. This should not be construed to prohibit use of chemicals for dust control and snow and ice removal.

Traffic safety. Passing lanes, turnouts, guardrails, signs, and other facilities as needed for safe traffic flow shall be provided. Traffic safety shall be a prime factor in selecting the angle and grade of the intersection with public highways. Preferably, the angles shall be not less than 85 degrees. The public highway shall be entered either at the top of a hill or far enough from the top or a curve to provide visibility and a safe sight distance. The clear sight distance to each side shall not be less than 300 feet, if site conditions permit.

Erosion control. If soil and climatic conditions are favorable, roadbanks and disturbed areas shall be vegetated as soon as possible and skid trails, landings, logging, and similar roads shall be vegetated after harvesting or seasonal use is completed. If the use of vegetation is precluded and protection against erosion is needed, protection shall be provided by nonvegetative materials, such as gravel or other mulches.

Roadside channels, cross drains, and drainage structure inlets and outlets shall be designed to be stable without protection. If protection is needed, riprap or other similar materials shall be used.

GENERAL CRITERIA

Watercourses and water quality shall be protected during and after construction by erosion-control facilities and maintenance. Filter strips, sediment and water control basins,

and other conservation practices shall be used and maintained as needed.

Dead end roads shall be provided with a turnaround. In some areas turnarounds may also be desirable for stream, lake, recreation, or other access purposes.

Parking space as needed shall be provided to keep vehicles off the road or from being parked in undesirable locations.

PLANS AND SPECIFICATIONS

Plans and specifications for constructing access roads shall be in keeping with this standard and shall describe the requirements for applying the practice to achieve its intended purpose.

ACCESS ROAD SPECIFICATIONS

Construction operations shall be carried out in such a manner that erosion and air and water pollution are minimized and held within legal limits. The completed job shall present a workmanlike finish. Construction shall be according to the following requirements as specified for the job:

1. Trees, stumps, roots, brush, weeds, and other objectionable material shall be removed from the work area.

2. Unsuitable material shall be removed from the roadbed area.

3. Grading, subgrade preparation, and compaction shall be done as needed.

4. Surfacing shall be done as needed.

5. Roads shall be planned and laid out according to good landscape management principles.

PLANNING CONSIDERATIONS FOR WATER QUANTITY AND QUALITY

Quantity

1. Effects on the water budget, especially on volumes and rates of runoff, infiltration, evaporation, transpiration, deep percolation, and ground water recharge.

2. Effects of snowcatch and melt on water budget components.

3. Effects on downstream flows or aquifers that would affect other water uses or users.

4. Effects on the volume of and timing of downstream flow to prohibit undesirable environmental, social, or economic effects.

Quality

1. Short-term and construction-related effects of this practice on the quality of on site downstream water courses.

2. Effects on erosion and the movement of sediment, pathogens, and soluble and sediment-attached substances that would be carried by runoff.

3. Effects on the visual quality of water resources.

4. Effects on the movement of dissolved substances below the root zone toward the ground water.

5. Effects on wetlands and water-related wildlife habitats that would be associated with the practice.